

HEINE QUALITY
MADE IN GERMANY

HEINE® NT300 Charger



CE

HEINE Optotechnik GmbH & Co. KG
Kientalstr. 7 · 82211 Herrsching · Germany
Tel. +49(0)81 52/38-0
Fax +49(0)81 52/38-202
E-Mail: info@heine.com · www.heine.com
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Please read and follow these instructions for use and keep them for future reference.

General Conditions of Warranty

Instead of the statutory warranty time period of 2 years, HEINE will grant a guarantee of 5 years from the date of the consignment of the goods ex works, concerning its equipment (excluding disposables, e.g. bulbs, single-use articles, and rechargeable batteries). Date of consignment means that HEINE hands the goods over to the transport carrier, freight forwarder or any other person designated by the Customer for the transport of the goods without loading the collecting vehicle.

The guarantee covers irreproachable workmanship, on condition of the proper use of the equipment and the observation of the operating instructions. During the warranty- and guarantee time period, errors and deficiencies arising on the equipment will be rectified free of charge, in so far as such are evidenced by defective materials, processing and/or constructional errors. Should buyer complain of a material deficiency during the warranty time period, then the onus of proof is always to be on the orderer, that the product was defective already upon receipt of the goods. The statutory warranty and the guarantee do not apply to loss or damage caused by wear and tear, negligent use, the non-employment of original HEINE components and/or spares (in particular bulbs, as these have been especially developed for HEINE instruments in accordance with the following criterions: colour temperature, useful service life, safety, optical quality and performance. The statutory warranty and the guarantee do not apply to interventions by persons not authorised by HEINE or when the operating instructions are not observed by the customer. Any modification of a HEINE product with parts or additional parts which do not conform to the original HEINE specification will invalidate the warranty for the correct function of the product and further invalidate any warranty claims which result from such a change or modification. Further claims, in particular claims for replacement of loss or damage, which are experienced otherwise than directly on the HEINE product itself, are hereby excluded.



For U.S. only:

Caution: Federal law restricts this device to sale by or on the order of a Physician or Practitioner!

Intended Use

The HEINE® NT300 charger is designed exclusively for charging HEINE BETA® rechargeable handles, HEINE BETA® Slim rechargeable handles and HEINE Laryngoscope rechargeable handles that must contain a HEINE rechargeable battery.

Warnings and Safety Information

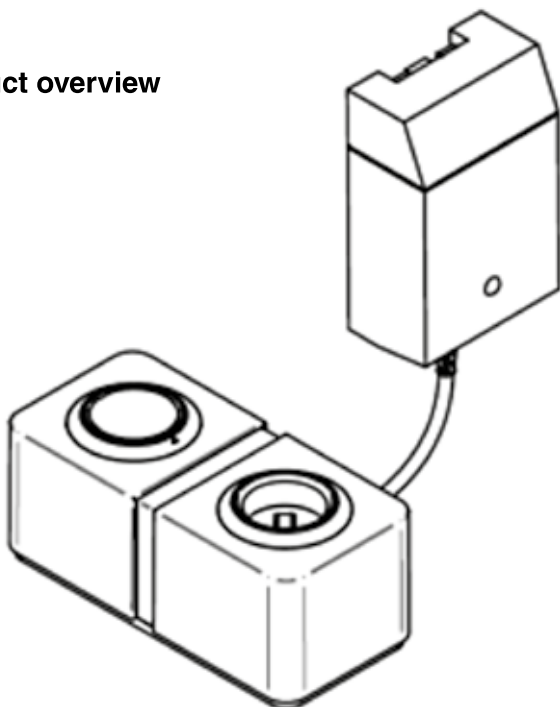


CAUTION! Indicates potential hazardous situations. Ignoring the corresponding instructions may lead to dangerous situations of mild to moderate extent. (Background color yellow; foreground color black).



NOTE! Indicates valuable advice in terms of installation, operation, maintenance or repair. Notes are important, but not related to hazardous situations.

Product overview



Primary plug:



EU



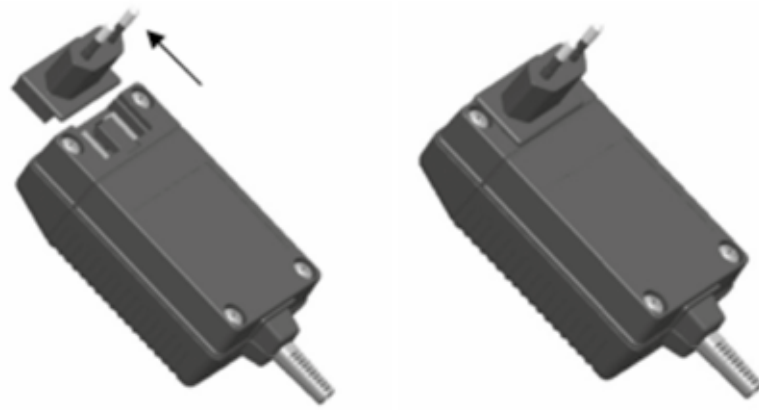
USA / Japan



UK



Australia



The primary plug is interchangeable. This allows a world wide use. The procedure of changing the plugs is as per the pictures.

⚠ The HEINE® NT300 is intended for installation in medical areas outside the patient environment (at least 1.5 metres from the patient or patient support pursuant to IEC 60601-1, see figure).

⚠ To prevent mechanical and electrical breakdown, never install or store the charger in the following areas:

- Areas exposed to high moisture or condensation
- Areas exposed to extreme environmental conditions
- Areas subject to constant vibrations
- Areas subject to severe temperature fluctuations
- Outdoors

Installation

- Do not place the NT300 on soft furniture, cloth or carpet.
- Do not insert any objects in any opening in the housing.

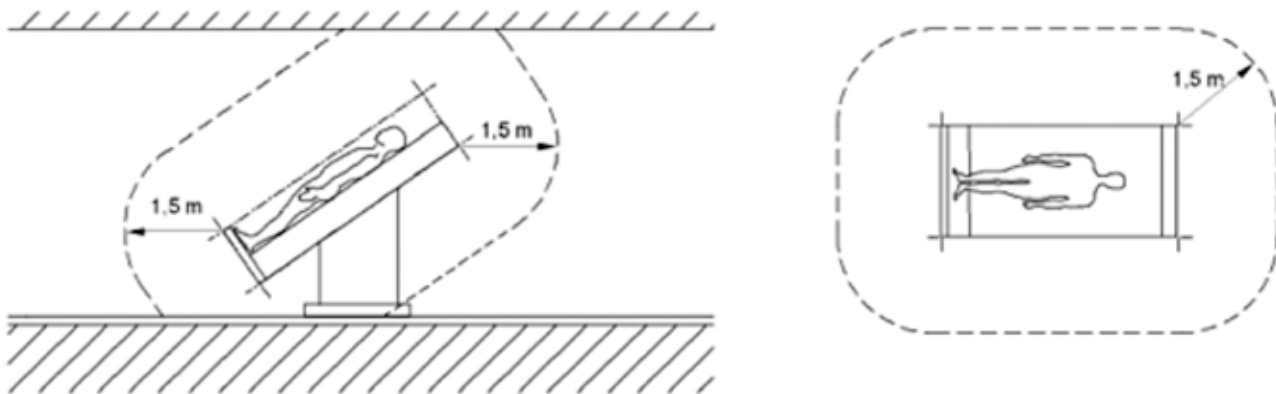



Fig1: The above figure defines the patient environment (minimum radius around the patient).

Installation, operation and use

The HEINE® NT300 is compatible with the following rechargeable handles:


- BETA L rechargeable handle
- BETA NT rechargeable handle
- BETA Slim rechargeable handle
- Standard F.O. laryngoscope handle
- Short F.O. laryngoscope handle
- F.O. angled handle
- Small F.O. laryngoscope handle

 The NT300 may only be used at the mains voltage specified on the identification label. Unplug the unit from the mains if not in use over long periods.


In the event of fluid ingress in the housing, the charger should be taken out of service and checked by an authorised person.

The NT300 must not be used in rooms where an explosion hazard is present.

Follow the instructions for the charger and rechargeable handles.

 The following handles are **not** compatible with the NT300 charger:
BETA TR, BETA R, BETA cord handle, mini3000 battery handle.

Plug the mains transformer into the mains and the NT300 is ready for use.
NT300 ensures that batteries are kept in good condition irrespective of handle size.

 When replacing the handles in the charging compartments, ensure that the internal contacts in the compartment are clean and that the instruments are switched off.

Instruments placed next to each other must not touch each other.

If different-sized handles are used, it is possible to fit adaptors so that each handle is held in place correctly.

Reduction rings for:



BETA Handle
F.O. angled handle
Standard F.O.
Short F.O. laryngoscope handle





Small F.O. laryngoscope handle
(optional)



BETA Slim rechargeable handle
(optional)

Ideally, the rechargeable handle should always be replaced and stored in the charger. Handles cannot be overcharged.


 The rechargeable battery can only be charged when fitted to the handle.

 The NT 300 must be disconnected from the mains supply when the adaptors are being fitted.

If the second charging compartment is not in use it can be sealed off by the dust cap which is supplied with the unit.

The pulsating light around the charging compartment shows that current is flowing and that the battery is being recharged.

When the light is permanently lit, the charging sequence is completed. The battery in the handle is fully-charged and is ready to supply maximum power.


 If the light is switched off, this indicates that the charging compartment is empty or the unit is defective.

Hygienic Cleaning / Processing:

The device must be cleaned by sufficiently qualified personnel.


We recommend that external surfaces of the NT300 be wiped clean with a disinfectant cleaning wipe.

The external surfaces may also be wiped clean with a cloth moistened with water or with a neutral pH or slightly alkaline cleansing agent.

 Any disinfectant used must be approved by the disinfectant manufacturer for use on plastics. The manufacturer's instructions must be followed.


Spray disinfection or immersion disinfection is not permitted since there is a risk of moisture ingress, which would damage the device.

Disinfection:

 The article can be **neither** machine-cleaned, **nor** thermal disinfected or sterilized. These processes lead to irreparable damage to the product.

Maintenance


The charger is maintenance free. However, it must be tested by a qualified electrician at periodic intervals of 24 months.

 Do not open the power adapter (risk of electric shock).

Service

This product does not require regular service.

Disposal

 The product must be recycled as separated electrical and electronic devices. Please observe the relevant state-specific disposal regulations.


Used or defect batteries must be disposed adequately. Avoid skin contact with defect batteries.

Technical specification

Mains supply:	100 – 240 V AC / 50 – 60 Hz
Current consumption:	max. 30 VA
Output:	15Vdc, 2A
Fuse:	Integral overload protection
Charging current:	Max. 1.5 A for BETA L Max. 0.5 A for other HEINE rechargeable batteries
Charging time:	BETA L rechargeable battery -> approx. 2 hrs Other HEINE rechargeable batteries -> up to 4 hrs
Safety class:	II
Protection class:	IP 20
<i>Environmental conditions for operation</i>	
Temperature:	+10°C to +40°C
Humidity:	10% to 75% r.h.
Air pressure:	700 hPa to 1060 hPa
<i>Environmental conditions for transport and storage</i>	
Temperature:	-20°C to +50°C
Humidity:	10% to 95% r.h.
Air pressure:	500 hPa to 1060 hPa

General Notes and Warnings

The HEINE® NT300 charger is a high-quality piece of equipment. Always handle with care.

 Check the correct operation of the product at regular intervals. Do not use the equipment if it shows visible signs of damage.

Do not use the device in hyperbaric chambers, in explosive or oxygen loaded environments!

Do not use the device near strong magnetic fields like MRI scanners.


We can only guarantee the performance of this device when fitted and used with original HEINE accessories and spare parts. Otherwise the HEINE Warranty is terminated.

The NT300 must not be charged using rechargeable batteries from other manufacturers.

Do not manipulate or modify the product!















The LED indicates that the power adapter is ready for use.



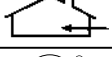







Do not pull the cable to disconnect the power adapter from the mains.

 Do not store or use the charger outdoors.

Explanation of utilized symbols


The following symbols are used on the device or on the packaging:

	The CE mark indicates that the product complies with the European medical device directive 93/42/EEC.
	Catalogue- or reference number
	Serial number
	Manufacturer
	Date of manufacture
	Product bearing this symbol may not be disposed of together with general household waste, but instead requires separate disposal according to local provisions. (European Waste Electrical and Electronic Equipment Directive, WEEE)
	Temperature limits in °C for storage and transport
	Temperature limits in °F for storage and transport
	Humidity limitation for storage and transport
	Pressure limitation for storage and transport
	Instructions for use
	Alternating current (AC)
	Fuse
	Interference may occur in the vicinity of equipment marked with the following symbol.

	Fragile, handle with care!
	Keep dry!
	For indoor use only
	“Grüner Punkt” (country-specific)
	Follow instructions for use! (Background: blue, foreground: white)
	Approval mark of SIQ (for Slovenia)
	Trade mark of the manufacturer
ta40/F	Rated ambient temperature/converter temperature class
	UL approval mark. Valid in the US and Canada.
	Class II equipment
IPx0	IP code (Ingress Protection Rating)
	Approval mark of Australia V xxxxx Q xxxxx

Electromagnetic Compatibility

Medical electric devices are subject to special precautionary measures with regard to electromagnetic compatibility (EMC). Portable and mobile high frequency communication equipment can affect medical electric devices.

	<p>This device is intended for use by medical professionals in the electromagnetic environment specified below. The user of this device should assure that it is used in such an environment.</p> <p>The use of accessories, converters or cables other than the ones specified by HEINE might lead to increased emission reduced electrical immunity of the medical equipment.</p> <p>The device may not be stacked directly near or used directly beside other devices. If the device is to be operated in a stack or with other devices, the device should be watched to ensure it operates properly in this location.</p>
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Guidance and manufacturer's declaration – electromagnetic emissions

The device is intended for use in the electromagnetic environment specified below.
The customer or the user of the device should assure that it is used in such environment.

Emission test	Compliance	Electromagnetic environment – Guidelines
RF emissions CISPR11	Group 1	The device uses RF energy only for its internal function. Therefore, RF-emission is very low and it is unlikely that any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The device is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes. Warning: This device is intended only for use by medical professionals. This is a device of class A CISPR 11 in the domestic environment, this device may cause radio interference, so that it may be necessary in this case, to take appropriate remedial measures, as e.g. orientation, new arrangement or shielding of the device or restrict the connection to the site.
Harmonic Emissions IEC 61000-3-2	Class A	
Voltage Fluctuations/ Flicker Emissions IEC 61000-3-3	Passed	

Guidance and manufacturer declaration - Electromagnetic immunity


The device is intended for use in the electromagnetic environment specified below.
The customer or the user of the device should assure that it is used in such environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – Guideline
Electrostatic discharge (ESD) acc. to IEC 61000-4-2	± 6 kV contact discharge ± 8 kV air discharge	± 6 kV contact discharge ± 8 kV air discharge	Floors should be wood, concrete or covered with ceramic tiles. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burst IEC 61000-4-4	± 2 kV for mains cables ± 1 kV for input and output lines	± 2 kV for mains cables ± 1 kV for input and output lines	The supply voltage quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV voltage phase – phase, ± 2 kV voltage phase – earth	± 1 kV voltage phase – phase ± 2 kV voltage phase – earth	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	< 5% U _T , (>95% dip in U _T) for 1/2 period 40% U _T , (60% dip in U _T) for 5 periods 70% U _T , (30% dip in U _T) for 25 periods <5% U _T , (>95% dip in U _T) for 5 seconds	< 5% U _T , (>95% dip in U _T) for 1/2 period 40% U _T , (60% dip in U _T) for 5 periods 70% U _T , (30% dip in U _T) for 25 periods <5% U _T , (>95% dip in U _T) for 5 seconds	Mains power quality should be that of a typical commercial or hospital environment. If the user of the device requires continued operation during power mains interruptions, it is recommended that the device be powered by a UPS (uninterruptible power supply) or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

Comment: U_T is the a.c. supply voltage prior to application of the test level.

Guidance and manufacturer's declaration – electromagnetic immunity

The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment Guidelines
Conducted RF IEC 61000-4-6	3 Veff 150 kHz to 80 MHz	3 V eff	Portable and mobile RF communication equipment should be used no closer to any part of the device, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.
Radiated HF IEC 61000-4-3	3 V/m 80MHz to 2,5GHz	3 V/m	<p>Recommended separation distance: $d = 3,5/3 * \text{SQRT} (P/W)$ $d = 3,5/3 * \text{SQRT} (P/W)$ 80 MHz to 800 MHz $d = 7/3 * \text{SQRT} (P/W)$ 800 MHz to 2,5 GHz</p> <p>where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey^a, should be less than the compliance level in each frequency range.^b Interference may occur in the vicinity of equipment marked with the following symbol:</p> 

Note 1: At 80Hz and 800MHz, the higher frequency range applies.

Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

- a** Field strengths from fixed transmitters, such as base stations for radio (cellular / cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the device is used exceeds the applicable RF compliance level above, the device should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the device.
- b** Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V / m.

Recommended separation distances for portable and mobile RF communication equipment and the device

The device is intended for use in the electromagnetic environment in which radiated RF disturbances are controlled. The customer or user of the device can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communication equipment (transmitters) and the device as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter (W)	Separation distance according to frequency of transmitter (m)		
	150 kHz to 80 MHz $d = 3,5/3 * \text{SQRT} (P)$	80 MHz to 800 MHz $d = 3,5/3 * \text{SQRT} (P)$	800 MHz to 2,5 GHz $d = 7/3 * \text{SQRT} (P)$
0.01	0.1	0.1	0.2
0.1	0.4	0.4	0.7
1	1.2	1.2	2.3
10	3.7	3.7	7.4
100	11.7	11.7	23.3

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be determined using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

Note 1: At 80 MHz and 800 MHz, the higher frequency range applies.

Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.